

This guide is for potential applicants to the U.S. Department of Agriculture (USDA) Small Business Innovation Research (SBIR) program. The document identifies unique aspects of the USDA SBIR program, describes the nature of its topics, and links readers to additional agency resources. When used in conjunction with MTIP's [Profile of a Good Candidate](#), this guide will help prospective applicants determine quickly whether to pursue funding under the USDA SBIR program and how best to approach a proposal.



THE SBIR/STTR PROGRAMS

The federal SBIR program is a source of early-stage R&D seed capital exclusively for small, tech-based U.S. companies engaged in serious R&D and commercialization of technologies of interest both to the government and to the company. Applicants submit proposals in response to specific topics released by each of the 11 participating agencies. Within each agency, the rules and requirements frequently change from one solicitation to the next. Prospective applicants must monitor closely each targeted agency's solicitations.

SBIR funding is provided as either grants or contracts, and does not have to be matched or repaid by the small business. The award monies can be used to fund most costs associated with the R&D project and up to a 7% profit margin. The company maintains ownership of any new intellectual property, and the government retains certain rights to use the technology.

SBIR is a three phase program starting with Phase I to establish the technical feasibility of the proposed technology. Phase I awards vary, but can be as high as \$225,000 for periods ranging from 6 to 12 months. Phase II is to perform more in-depth R&D on the technology, ideally moving toward prototyping and demonstration. Phase II awards range as high as \$1.5 million, generally for a period of up to two years. The objective of Phase III is commercialization of the technology. This phase is non-funded though some agencies offer extra assistance in the form of commercialization support programs.

In SBIR Phase I, up to 33% of the total budget may go to outside services, including consultants and subcontractors. In Phase II, this figure rises to 50%. In addition, for both Phase I and II, the Principal Investigator (PI) must be employed by the company for greater than 50% of ordinary work hours for the duration of the project.

Overall, agencies report that the chance of winning a Phase I award ranges from ~7% to ~15%. Well-qualified Montana applicants can substantially improve these odds by working closely with the no-cost services offered by the Montana Technology Innovation Partnership (MTIP). If not currently enrolled for MTIP services, see the information box at the end of this guide.

USDA SBIR PROGRAM

The USDA SBIR program is an opportunity for small technology businesses to secure substantial R&D funding targeting the agricultural sector, rural health care and communities, and the environment. Qualified companies with an advanced research concept can apply to the program with the aims of solving important scientific problems and creating rural commercial opportunities.

USDA operates its SBIR program through the National Institute of Food and Agriculture ([NIFA](#)) which include the Agriculture and Food Research Initiative (AFRI) and Sustainable Agriculture Research and Education (SARE) programs. The website provides information on eligibility requirements, review criteria, and commercialization planning. The NIFA Abstracts web page makes it easy for prospective applicants to review previous years' topics, and past awardees and their project abstracts. USDA changes its SBIR topics and instructions little from year to year, so reviewing previous topics and awards provides insight into the areas of interest. USDA SBIR proposals are submitted through Grants.gov. The link to the USDA SBIR opportunity documents on Grants.gov can be found on the USDA SBIR [Phase I and Phase II Solicitations](#) web page. The Full Announcement (solicitation) and Application Package can be downloaded from links under their respective tabbed heading at Grants.gov.

USDA's SBIR award levels are different than many other agencies. In recent years, Phase I awards for technical feasibility have been capped at \$100,000, with project periods extending no more than eight months. Follow-on

Phase II awards to develop and test a prototype have reached \$500,000 for projects extending up to two years. Only Phase I awardees are eligible to apply for Phase II.

Technologies funded through SBIR are driven by the USDA's perceived market needs, or "Research Topics." These topics are typically listed in Section 8 of USDA's annual program solicitation. The solicitation is usually released in early July, with applications due in early October and award announcements expected to be announced by the second quarter of the following year.

USDA is serious about funding technologies that have a good chance of being successfully commercialized. The applicant's commitment to conversion of USDA-sponsored research into technological innovation in the private sector should be emphasized in the Phase I application and extended into the Phase II application in the form of a detailed commercialization plan. Applications reflecting a team approach involving both high-level technical expertise—preferably including university involvement—and strong industry relationships are likely to be reviewed most favorably.

IDENTIFYING AN APPROPRIATE TOPIC

USDA identifies 10 topic areas which can vary from one solicitation to the next. Early interaction with program personnel can help direct an applicant to the USDA technology topic area that best matches the proposed research.

The USDA Program Priority Areas consist of agriculturally-related Manufacturing Technology, and Energy Efficiency and Alternative and Renewable Energy projects with relevance to current solicitation topics.

The following topic areas are usually included among USDA's research topics.

Forests and Related Resources	Rural and Community Development
Plant Production and Protection (Biology)	Aquaculture
Animal Production and Protection	Biofuels and Bio-based Products
Air, Water and Soils	Small and Mid-sized Farms
Food Science and Nutrition	Plant Production and Protection (Engineering)

Research topic descriptions are located in the Program Solicitation. Applicants are encouraged to adhere to specific instructions within each of the topic area descriptions. Each topic description provides background, research priorities and other key information. Applicants should apply to the topic area deemed most appropriate. USDA reserves the right to shift applications between topic areas when necessary to achieve the most effective review.

CONTACTING THE AGENCY

Before completing a USDA SBIR application, participants are strongly encouraged to communicate with an USDA program officer to gauge if a project is in alignment with the program technology thrust and commercial impact criteria. Contact information of program officers can be found under each topic heading within the Program Solicitation.

Though not required, it is strongly recommended applicants submit a 1-2 page Executive Summary for pre-submission feedback. Responsiveness of USDA personnel is limited as the submission deadline is approached. An MTIP counselor can assist with summary development and review before contacting the USDA.

PREPARING/SUBMITTING THE PROPOSAL

The purpose of the proposal is to provide sufficient information to persuade reviewers that the proposed research offers a unique and sound approach to addressing the need expressed in the USDA announcement. The proposal should be written at a level of quality suitable for publication. Following are general recommendations for ways in which applicants can enhance their chances for success:

- **Start early.** Reviewing previous USDA solicitations will permit valuable insights for advance planning and preparations. Proposal submission requires multiple electronic registration efforts that can require 6 to 8 weeks for completion. These include 1) a one-time registration to obtain a DUNS number which requires a

valid Employers' Identification Number (EIN or tax ID number), 2) a government contractor registration on the System for Awards Management (SAM), 3) a one-time registration with the SBA Company Registry (SBIR.gov), or an update of the Registry for the new application, and 4) registration with Grants.gov.

- **Dive into planning.** Applicants can discuss their project and proposal approaches with an MTIP counselor. The project must be vetted in terms of the agency's review criteria and past awards. Give careful thought to any outside consultants or subcontractors, with the understanding that these individuals should strengthen the team's credentials. Identify necessary letters of support and set a plan for securing them. Many aspects of the proposal can be planned and even drafted well before USDA releases its announcement. Valuable insights can be gained from reviewing past award abstracts and the websites of the successful applicants. USDA awards can be searched at: <http://nifa.usda.gov/abstracts-funded-sbir-projects>.
- **Read the entire solicitation.** All SBIR agencies have specific requirements for font size and style, page limits, marking of confidential information, and other aspects of the proposal. Agencies routinely reject proposals that don't comply with these instructions. One person on the proposal team must be responsible for reading the instructions thoroughly, noting all requirements. Initiate a properly-formatted proposal template that puts key guidance for each section into comment boxes for easy reference while writing. Use the agency website to find instructional webinars or other guidance specific to its process.
- **Develop a project plan that envisions both the Phase I and the Phase II R&D activities.** Start the writing effort by developing well-defined Project Narrative. Follow the instructions carefully in writing this piece that is the backbone of the technical proposal. Outline a work plan for achieving the objectives, giving consideration to what must be performed in Phase I to create a good foundation for Phase II. For USDA, the work plan must include a means (e.g. testing) to examine how the proposed product will lead to the proposed technical outcomes. Review these pieces to determine whether the project matches well with the topic and agency guidelines. Conduct a team meeting to get full buy-in on the proposed work plan AND on the proposal-writing efforts. Develop a schedule and assign responsibilities for completion of the proposal. Immediately start the process of collecting team Curriculum Vitae and letters of support.
- **Obtain an outside, third-party review.** Regardless of the applicant's experience with SBIR, secure an MTIP or other third party review of the draft proposal. Even the most experienced applicants have a tendency to get "off point" when working through the details of so many sections. Invariably, good outside reviews help ensure the proposal is responsive to the instructions and identify meaningful ways in which to enhance both the content and the presentation of the proposal. Provide the proposal to a reviewer not less than one week before submission so that suggested changes can be implemented.
- **Submit early.** Applicants should plan to submit their proposals at least two days prior to the final due date. Early submission avoids the possibility of server overload, and gives applicants ample time to resolve any problems that arise during the electronic submission process.

READY FOR THE NEXT STEP?

This agency-specific SBIR guide has been prepared by the Montana Technology Innovation Partnership (MTIP) and does not imply endorsement from the U.S. Department of Agriculture. A program of the Montana Department of Commerce, MTIP provides free coaching to Montana technology-based companies seeking help in applying to federal and state R&D and commercialization funding programs. For more information, contact the MTIP Program Manager at (406) 841-2734 or visit MTIP's website at www.mtip.mt.gov.

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